



**DETAILED ACTION**

***Election***

Newly submitted claims 10-12 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons. The product can be made by a materially different method such as connection of a component by solder deposition. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 10-12 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

***Drawings***

The drawings are objected to for the following points.

- The last paragraph of page 1 is vague: are figures 11-12 prior art? Clarification is required. If they are, the drawings should include a legend of prior art. The term "related art" is ambiguous and does not properly clarify.
- In the drawings, all of the parts shown in section should be cross hatched with a pattern consistent with the patterns shown in MPEP 608.02, page 600-84. Further, the cross hatching of (23) in figure 11 is incorrect. See page 600-84 for the correct pattern.

***Treatment of Claims Based on Language and Format***

35 USC 112, second paragraph, states:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-9 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 is indefinite. The ultrasonic device is not a claim element. Therefore, the vibrating direction cannot be claimed because without the ultrasonic device, there is no vibration. As such, positively reciting this direction renders the scope of claim 7 indefinite. If the phrase “configured to extend” is not a positive limitation and means that the direction has the capability of being along a direction, then clarificatin should be made and the rejection will be withdrawn. Art has not been applied to this limitation.

The terminology “configured to correspond to the plurality of bumps,” at lines 5-6 of claim 7, is confusing. Examiner assumes that applicant means the bumps are not claimed, but that the bonding area is capable of correspondence to bumps of device.

Claims 8-9 depend from claim 7.

#### ***Treatment of Claims Based on Prior Art***

35 U.S.C. §102 states:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) he has abandoned the invention.

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

(f) he did not himself invent the subject matter sought to be patented.

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

Claim 7 is rejected under 35 U.S.C. §102(b) as being anticipated by Martin (US 3908185).

Martin discloses in figure 3, a circuit board (16) with a main body and a conductive layer having conductive patterns (44,46) formed on the main body. At least one bonding area is defined in the pattern (which is capable of corresponding to a bump). The conductive layer has an isolated notch (42) formed in the layer proximate the bonding positions. The notch extends in a direction.

Claims 7-9 are rejected under 35 U.S.C. §102(e) as being anticipated by Lebaschi (US 5764485).

Lebaschi discloses a board with a conductive pattern (the pattern of the pads) formed in a conductive layer on a main body of the board with bonding areas (29) as part of the pattern and where an isolation notch (40') is formed in the conductive layer proximate the bonding area, and where the notch narrows a part of the pattern at the bonding area.

#### *Response to Arguments*

Applicant's arguments have been reviewed, but are not persuasive.

Claims 4-6 do not read on the elected species. There is no need to state that the rectangle is isolated. If a portion of the rectangle is removed, it is no longer in the shape of a rectangle.

The drawing corrections are not approved because the legend "related art" is unclear. Also, the cross hatching patterns are incorrect (both metal and insulator are hatched the same) When resubmitting drawing corrections, all of the corrections should be present in the newly submitted set.

Applicant has no specific arguments alleging errors in the present rejection, and the rejection is given to newly submitted claims, thereby making any outstanding arguments moot. Nevertheless, one related point that examiner would like to note is that patentability of the present invention cannot be based on the direction of vibration of a tool used to manufacture this device where the structure of the device is identically disclosed otherwise.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

*Closing*

Any inquiries related to the examination of this application should be directed to Examiner Kamand Cuneo at (703)308-1233 or her supervisor, Examiner Jeffrey Gaffin, at (703)308-3301. Inquiries of a general nature should be directed to the group 2800 receptionist at (703)308-0956. The general fax number to group 2800 is (703)308-7722 or 7724.

  
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